

REMARKS/ARGUMENTS

Claims 9-18 stand rejected. In the present Amendment, the specification and claims 9, 15 and 16 have been amended. No new matter has been introduced into the present application by any of the amendments. Reconsideration of the present application is respectfully requested in view of the following remarks.

Applicants note with appreciation the withdrawal of the rejections under 35 U.S.C. 112, second paragraph.

Statement of Substance of Interview

Applicants wish to thank the Examiner for the personal interview held on May 6, 2004, concerning the present application. In the interview, the claims and the references cited in the Office Action dated March 31, 2004, were discussed and the undersigned proposed the amendments to claim 9 that are shown above. The Examiner agreed that the amended claim 9 looked patentable over the cited art, especially in view of the advantages gained by using the process of the present invention.

The Prior Art Rejections

The rejection of claims 9, 10, 11, 13, 14 and 15 under 35 U.S.C. 102(b) as being anticipated by Sabatier is respectfully traversed for the reasons set forth below.

As discussed during the interview, Sabatier does not disclose the invention of the present claims. Sabatier, at best, teaches a reagent for use in determining enzyme activity in a liquid phase obtained by leaching the enzymes from the sample (e.g., the type of process used in a testing laboratory or in the quality control portion of a feed-producing factory). In other words, Sabatier deals with testing the enzyme activity after the enzymes have been extracted from the sample of interest. There is no teaching of directly testing the enzyme activity in a solid feed sample (e.g., where the solid feed sample, reagent and buffer are all brought together in one container and the enzyme activity is determined from the liquid phase present in the container - which is still in contact with the solid feed material itself). Thus, the Sabatier reference does not teach the process of the present invention, which has several advantages over the processes described in the Sabatier reference. For example, since the process of the present invention tests the enzyme activity in the solid feed itself, and does not require any heavy or expensive equipment, it can be performed easily and rapidly in the field, which is a great advantage over the prior art techniques, which were relatively expensive and required days to perform because the field samples had to be sent to labs for testing and analysis. Further, since the present test has eliminated the need to first leach or extract the enzymes from the feed (i.e., into a liquid phase) and then separate the liquid phase from the solid feed phase before the enzymes in the liquid phase are tested,

which were time consuming and labor intensive steps in the prior art processes, there is a savings of both time and resources. Accordingly, it is respectfully requested that the Examiner reconsider and withdraw this rejection in view of the amendments to the claims and the foregoing remarks.

The rejection of claim 16 under 35 U.S.C. 103(a) as being unpatentable over Sabatier is respectfully traversed for the reasons set forth below.

As discussed above, Sabatier does not disclose or suggest that the reagent be combined with the solid feed sample in the presence of a buffer that dissolves the enzyme of interest. The use of such a process, as described above, has many advantages over the prior art processes. Although the process of claim 16 separates the liquid phase from a solid phase (which is primarily or completely the solid feed sample), so that the coloration of the liquid phase can be easily measured by comparison with a color scale, this is really just for convenience and does not change the fact that the liquid phase whose coloration is being measured was created by contacting the reagent with the solid feed sample and the liquid buffer in one container. The reagent was not contacted with a liquid phase bearing the extracted enzyme after the liquid phase was separated from the solid phase (as in the prior art techniques). The contacting of the reagent with the solid feed sample in one container is not obvious in view of Sabatier, which teaches that such contact should be avoided so that the reagent does not interact with the solid feed sample and create inaccurate measurements of the activity of the enzyme. Accordingly, claim 16 is not obvious in view of Sabatier.

Moreover, the use of the process of the present invention, including the process of claim 16, results in advantages (discussed above) that are not taught or suggested in Sabatier. If anything, Sabatier creates a prejudice against directly contacting the reagent and the solid feed sample, because a person of skill in this art, after reviewing Sabatier, would believe that such contact leads to inaccurate measurements of the activity of the enzyme.

The rejection of claim 12 under 35 U.S.C. 103(a) as being unpatentable over Sabatier as applied to claim 16, and further in view of Turner, is respectfully traversed for the reasons set forth below.

As discussed above, Sabatier does not disclose or suggest the invention of the present claims. Further, Turner is not properly combinable with Sabatier (no motivation to combine these references) because it is directed to techniques that are designed to allow chemically specific patterning and modification of surfaces (see col. 3, lines 45-46) for the production of stamps or in high resolution lithography. There is no discussion at all of the production of immobilized enzymes of the type that would be useful in the measurement of enzyme activity in solid feed samples. Accordingly, applicants respectfully submit that Sabatier and Turner relate to technologies that are too different to combine with any reasonable expectation of success. Further, assuming arguendo that the teachings of Sabatier and Turner were properly combinable, the combination would still not result in the invention of claim 12, for the reasons stated above concerning the differences between the presently claimed process and the process of Sabatier. Accordingly, it is respectfully requested that the

Examiner reconsider and withdraw this rejection in view of the amendments to the claims and the above remarks.


The rejection of claims 17 and 18 under 35 U.S.C. 103(a) as being unpatentable over Sabatier as applied to claim 16, and further in view of Bio-Rad Labs, is respectfully traversed for the reasons set forth below.

As discussed at the interview, the Bio-Rad Labs document simply discloses columns that can be used in chromatography. The Examiner is correct that these columns do have snap-off tips. However, the fact that it is possible that these columns could be used with the processes described in Sabatier does not mean that it is proper to combine the teachings surrounding these columns with the teachings of Sabatier in the absence of some teaching in the references that would motivate one of ordinary skill to make the combination. The combination being made by the Examiner is really just an attempt to piece together the invention of the present claims from various teachings in the prior art using hindsight. There is simply no teaching in either Sabatier or the BioRad documents that would motivate one of ordinary skill in the art to use the columns of BioRad in the process of Sabatier. However, assuming arguendo that the combination of these references was proper, the combination would not result in the invention of the present claims for the reasons stated above concerning the deficiencies in the teachings of Sabatier. Accordingly, it is respectfully requested that the Examiner reconsider and withdraw this rejection in view of the amendments to the claims and the above remarks.

The references that are cited of interest, but not applied, do not teach or suggest the invention of the present claims.

In view of the above, it is respectfully submitted that all of the present claims (i.e., claims 9-18) are in condition for allowance. Accordingly, issuance of a Notice of Allowability for claims 9-18 is respectfully requested.

Respectfully submitted,
CONNOLLY BOVE LODGE AND HUTZ LLP

By 
William E. McShane
Reg. No. 32,707
Tele.: (302) 658-9141